

# City and County of Honolulu Public Hearing Presentation

Draft Integrated Solid Waste Management Plan

July 31, 2019

**JACOBS®**

# Agenda Review

- i. Welcome and Agenda Overview
- ii. Presentation – Draft ISWMP
- iii. Question and Answer Session – Draft ISWMP
- iv. Public Comments – Draft ISWMP
- v. Next Steps
- vi. Thank you and adjourn



# Presentation - Draft ISWMP

# ISWMP Background

- **What it is:** a comprehensive waste reduction, recycling, composting, and disposal program
- **What it includes:**
  - Documentation of existing conditions
  - An evaluation of needs and opportunities for improving ways to manage solid waste
  - Establishing an implementation schedule for those improvements
- **Hawaii Revised Statutes Requirements (HRS, Section 342G)**
  - County submittal of ISWMP revision every ten years
  - Interim status reports every five years
  - Establishes the structure of the ISWMP, and outlines the state review process

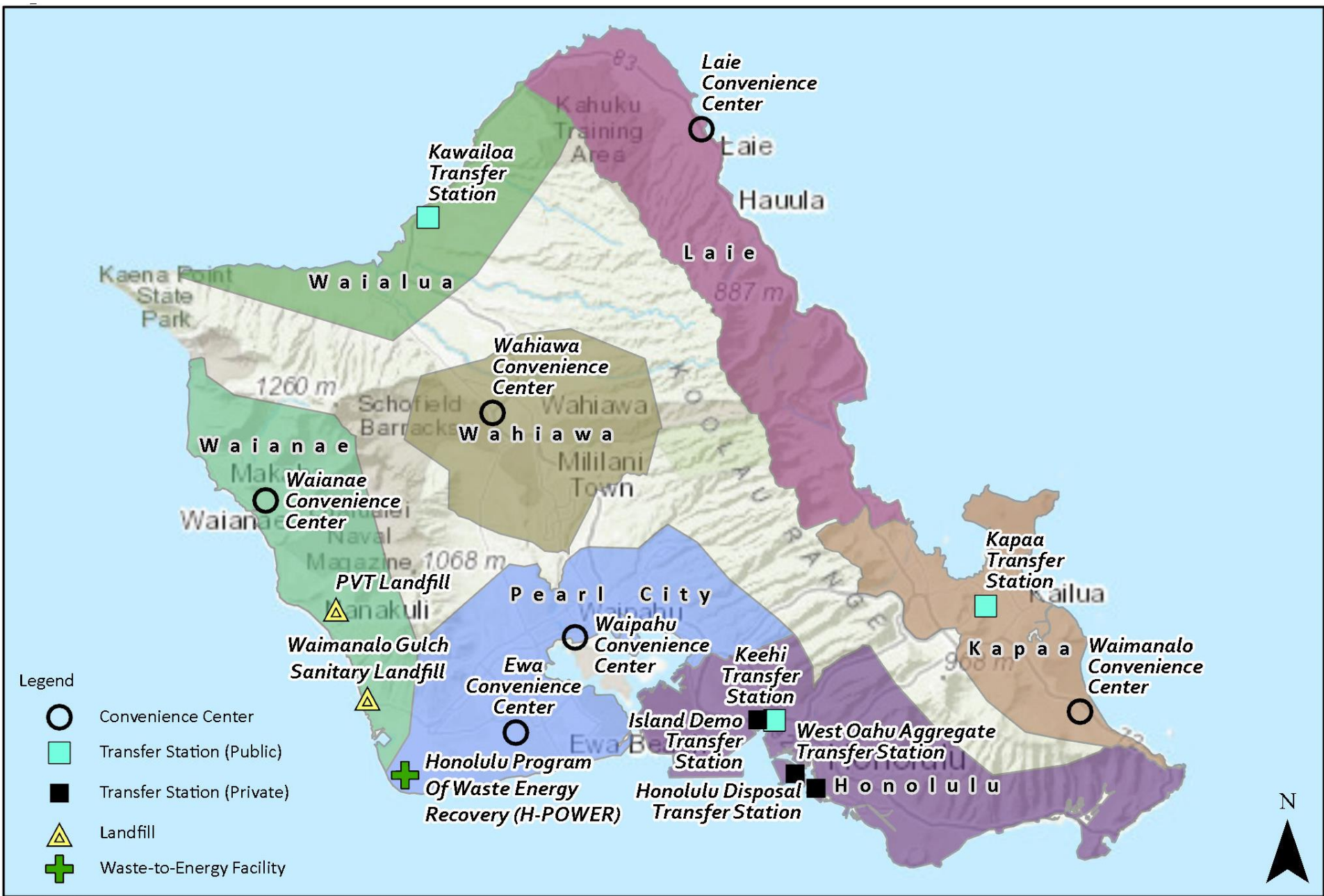
# History of the City and County of Honolulu ISWMP

- First Plan in 1971: updates in 1983, 1995, 2004, and 2008
- Provided a road map for managing the island's waste
- Public and stakeholder input during the ISWMP update process
- 30-Year Enhancements
  - Many initiatives to reduce, reuse, and recycle waste
  - Residential curbside collection of green waste and mixed recyclables
  - Conversion to fully-automated cart collection
  - Two major transfer stations and six convenience centers
  - H-POWER – in 28 years converted 17 million tons of refuse to 8.5 MWh or electricity

# Current Solid Waste Management System

- Solid waste collection
- Convenience centers
- Transfer stations
- Energy recovery
- Landfilling
- Recycling and bioconversion (green waste)
- Source reduction
- Special waste management
- Household hazardous waste (HHW)
- Public education





# Projected MSW and Recycled Material

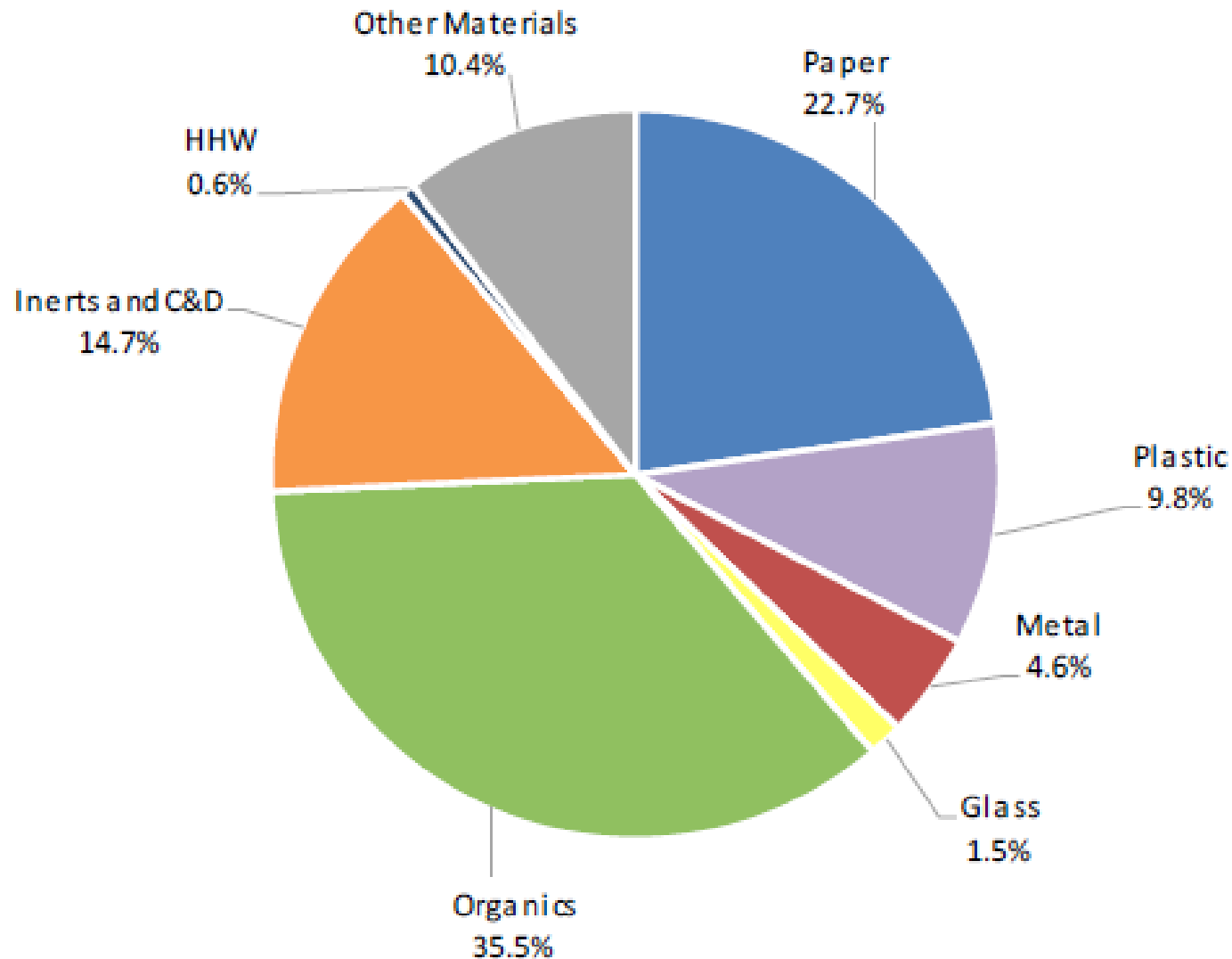
Year	Total MSW Generated (tons)	Recycled Material (tons)	Total MSW Received (tons)
2005	1,358,983	417,669	941,314
2010	1,208,542	448,639	759,903
2015	1,261,555	478,934	782,621
2016	1,261,729	488,394	773,335
2017	1,240,044	434,934	805,110
2020	1,288,340	504,591	783,749
2025	1,315,924	521,508	794,417
2030	1,339,175	535,864	803,311
2035	1,359,331	548,380	810,951
2040	1,377,157	559,503	817,654

Note:

Data excludes C&D disposal and about 763,000 tons of C&D recycling done mainly at private facilities.

Source: R.M. Towill Corporation and SMS Research Services. 2017. *Assessment of Municipal Solid Waste Handling Requirements for the Island of O'ahu*. Prepared for the City and County of Honolulu Department of Environmental Services, Recycling and Landfill Diversion.

# Waste Composition Results Summary



# Plan Development

Kickoff	Nov 2017
7 Advisory Committee Meetings	Nov 2017 – Oct 2018
AC Review Draft	Oct 2018
120 day AC Review	Oct 2019 – Feb 2019
90 day HDOH Review	Mar 2019 – May 2019
Public Review	Jun 2019 – Aug 2019
Final Plan	Sep 2019

# Plan Contents

1. Existing System
2. Solid Waste Generation
3. Source Reduction
4. Recycling and Bioconversion
5. Special Wastes
6. Household Hazardous Waste
7. Public Education
8. Facility Capacity and Siting
9. Marketing and Procurement
10. Energy Balance
11. Cost Analysis
12. Implementation Plan

# Implementation Plan –

## 3. Source Reduction

- Source Reduction Working Group
- Home composting workshops
- Residential user fees
- Food waste reduction monitoring and strategies
- Ongoing support of source reduction activities



### Plastic Bag Ban



# Implementation Plan –

## 4. Recycling and Bioconversion

- Evaluation of recycling versus waste-to-energy
- Legal changes to provide flexibility for sending hard-to-recycle items to H-POWER
- Residential curbside collection optimization to increase efficiency
- Recycling containers in public locations
- Beneficial use of non-deposit glass and ash
- Pilot appointment system for bulky item collection



# Implementation Plan –

## 5. Special Waste

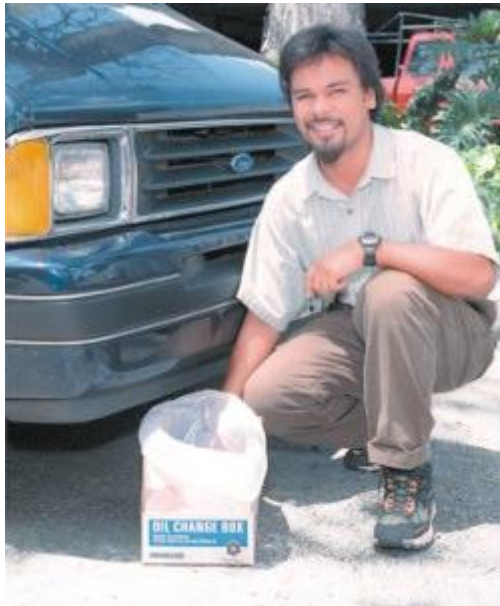
- WWTP sludge to biosolids rather than landfill
- Balance solid waste and ash locations at WGS landfill
- Beneficial use of metal recycling residue
- Sharp diversion strategies
- Select agricultural wastes to H-POWER



# Implementation Plan –

## 6. Household Hazardous Waste and E-Waste

- Expanded number of HHW collection events
- State legislature engagement to address E-waste
  - Encourage Advanced Disposal Fee
- Promote opportunities for E-waste collection and recycling



# Implementation Plan –

## 7. Public Education

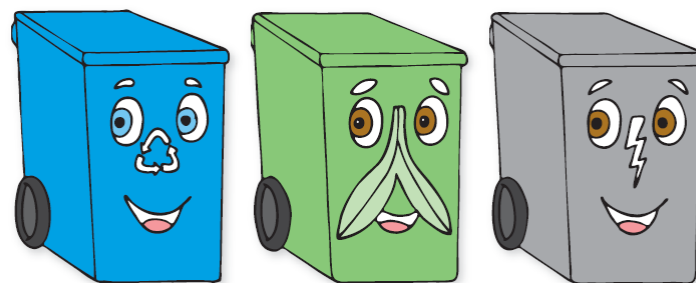
- Opala.org improvements
- Public education material updates
- Tour de Trash event increases
- Community event expansion
- Cart inspection and compliance enforcement increases
- Promotional partnerships with major retailers
- Public education coordinator position if funding available
- Collaborations for waste reduction advertisements (NRDC, HPR)

## Tour de Trash



WHERE DO THINGS GO?

KEVIN SORTS IT OUT



# Implementation Plan –

## 8. Facility Capacity and Siting

- Pilot test metals bin for convenience centers
- Potential partnership with nonprofits
- **Keehi Transfer Station:** Open-top loading, bulky waste acceptance, review other materials, assess expanded hours and accepting Honolulu and household green waste
- **Kapaa Transfer Station:** Green waste loadout, repairs, structural improvements
- **Kawailoa Transfer Station:** Additional load-out area



# Implementation Plan –

## 8. Facility Capacity and Siting (continued)

- H-POWER Waste processing and baling project
- Annual landfill life assessments
- Landfill site selection 10 years prior to depletion of capacity at WGSL
- Leeward Base Yard
- Campbell Industrial Park facility assessment and development: Convenience center, white goods processing, glass processing, ash and auto-shredder residue, materials recovery facility



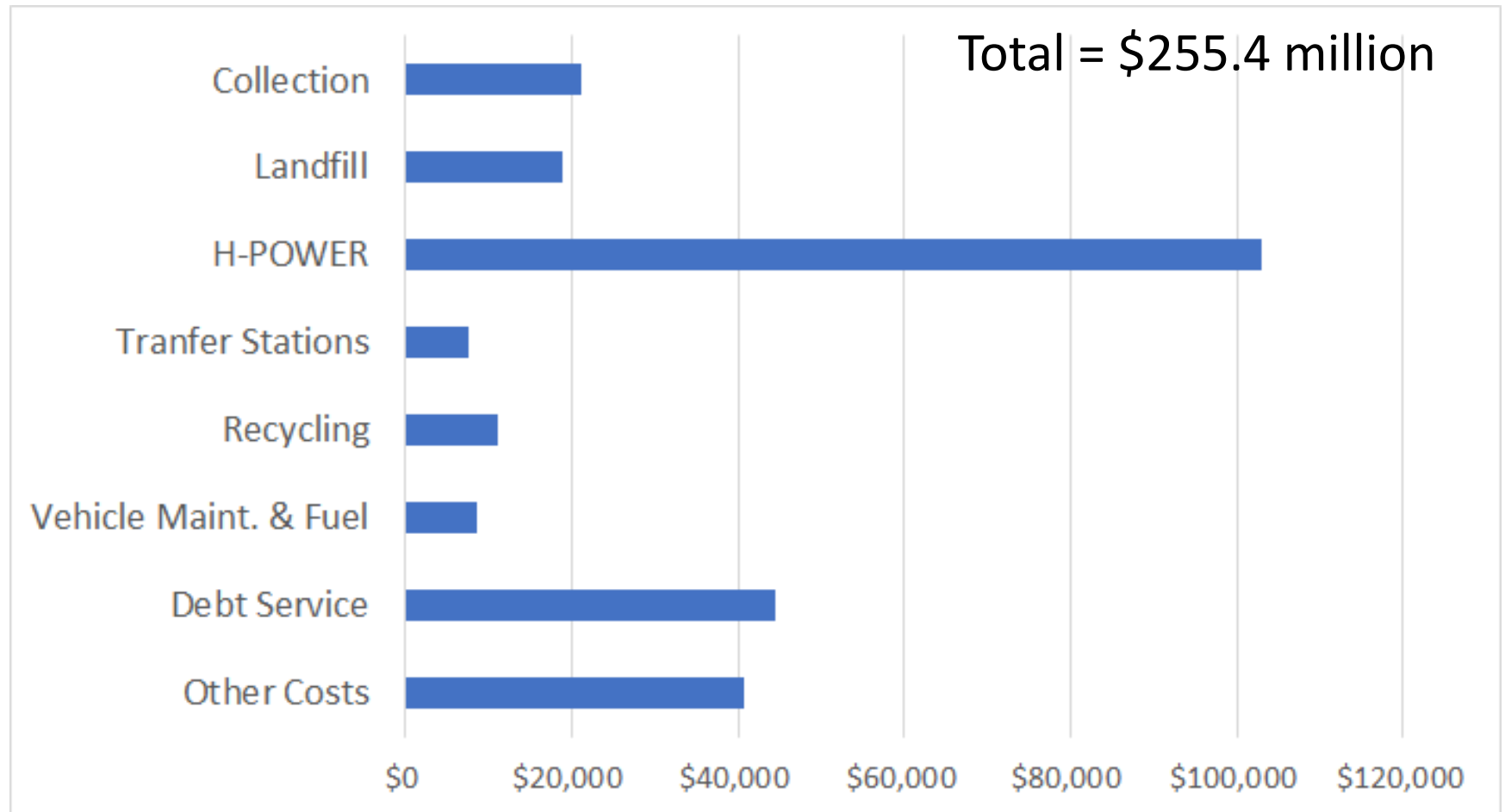
# Implementation Plan –

## 9. Materials Marketing and Procurement

- HI-5 redemption center location identification
- Tire collection optimization for processing at H-POWER
- Solicit proposals for beneficial use of glass, auto-shredder residue, and white goods



# FY 2019 Expenses (\$000)



# System Cost Analysis

## Required Revenue Projections (\$000)

Revenues	Budgeted	Projected					
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
<b><i>Refuse Division</i></b>							
Refuse General Operating Account	\$2,751	\$2,757	\$2,763	\$2,769	\$2,775	\$2,781	\$2,787
Solid Waste Disposal Facility Account							
H-POWER Electricity	\$73,500	\$73,669	\$73,838	\$74,009	\$74,179	\$74,349	\$74,521
Tip Fees	\$53,536	\$53,659	\$53,783	\$53,906	\$54,030	\$54,155	\$54,279
Glass Incentive Account	\$500	\$501	\$502	\$503	\$504	\$505	\$506
Recycling	\$6,500	\$6,515	\$6,530	\$6,545	\$6,560	\$6,575	\$6,590
<b><i>Refuse Division Total</i></b>	<b>\$136,787</b>	<b>\$137,101</b>	<b>\$137,416</b>	<b>\$137,732</b>	<b>\$138,048</b>	<b>\$138,365</b>	<b>\$138,683</b>
<b><i>Other Sources</i></b>							
Miscellaneous Revenue	\$889	\$889	\$889	\$889	\$889	\$889	\$889
General Fund Subsidy	\$117,760	\$123,868	\$129,135	\$134,006	\$137,31	\$143,388	\$147,558
<b><i>Other Sources Total</i></b>	<b>\$118,648</b>	<b>\$124,757</b>	<b>\$130,024</b>	<b>\$134,895</b>	<b>\$138,206</b>	<b>\$144,277</b>	<b>\$148,447</b>
<b><i>Total Revenue</i></b>	<b>\$255,435</b>	<b>\$261,858</b>	<b>\$267,440</b>	<b>\$272,627</b>	<b>\$276,254</b>	<b>\$282,642</b>	<b>\$287,130</b>

# Question and Answer Session – Draft ISWMP